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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/856,005 | 05/16/2001 | Noriyoshi Kuroyanagi | 172A-3118-PC | 2611 |

7590 10/18/2004
Koda & Androlia
2029 Century Park East
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EXAMINER

MUNOZ, GUILLERMO

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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2637

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/856,005

Applicant(s)

KUROYANAGI ET AL.

Examiner

Guillermo Munoz

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

Figure 12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: The specification should be amended to correct numerous typographical errors throughout specification. For example the term "sowing" in page 9, line 16, should be replaced with the term —showing—.

Appropriate correction is required.

Claim Objections

Claims 1 and 3 are objected to because of the following informalities:

Claim 1 recites the limitation "CDMA" in line 1 and "ZCCZ" in line 2. It is suggested the phrase "CDMA" be changed to —Code Division Multiple Access (CDMA)—. Furthermore, it is suggested the limitation "ZCCZ" be changed to —Zero Cross Correlation Zone (ZCCZ)—.

Additionally, Claim 1 recites the limitation “means for receiving the received base band symbol frame” in lines 15-16. It is suggested that the limitation “means for receiving the received base band symbol frame” be changed to —means for receiving the base band symbol frame—.

Claim 3 recites the limitation “CDMA” in line 1, “ZCCZ” in line 2, and ZCZ in line 4. It is suggested the phrase “CDMA” be changed to —Code Division Multiple Access (CDMA)—; the limitation “ZCCZ” be changed to —Zero Cross Correlation Zone (ZCCZ)—; and the limitation “ZCZ” be changed to —Zero Correlation Zone (ZCZ)—.

Appropriate correction is required.

Claim Rejections - 35 USC § 112 First Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3-6 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a code selector for preparing one sequence and a frame expansion circuit for expanding a center frame, note Fig. 2, does not reasonably provide enablement for a means for preparing one sequence, preparing a block sequence d, producing a repetitive ZCZ sequence and a repetitive block sequence, and producing in advance a product sequence. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

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Claim 3 is rejected as being a single means claim, i.e., where a means recitation does not appear in combination with another recited element of means; is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor. See MPEP 2164.08(a).

Claims 4-6 are dependent on rejected claim 3; and are rejected under 35 U.S.C. 112, first paragraph.

Claim Rejections - 35 USC § 112 Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation “and hard decision making of the demodulated output” in line 21, rendering the claim indefinite for failing to clearly indicate which element of the claim performs the hard decision.

Claim 2 is dependent on rejected claim 1, and is rejected under 35 U.S.C. 112, second paragraph.

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Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 comprises both product and process limitations. "The claim does not provide competitors with an accurate determination of the Metes and Bounds of protection involved so that an evaluation of the possibility of infringement may be ascertained with a reasonable degree of certainty." (Lyell 17 USPQ2d 1548, Bd. Pat. App. & Inter. 1990)

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 comprises both product and process limitations. "The claim does not provide competitors with an accurate determination of the Metes and Bounds of protection involved so that an evaluation of the possibility of infringement may be ascertained with a reasonable degree of certainty." (Lyell 17 USPQ2d 1548, Bd. Pat. App. & Inter. 1990)

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 comprises both product and process limitations. "The claim does not provide competitors with an accurate determination of the Metes and Bounds of protection involved so that an evaluation of the possibility of infringement may be ascertained with a reasonable degree of certainty." (Lyell 17 USPQ2d 1548, Bd. Pat. App. & Inter. 1990)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suehiro in view of (Applicant Admitted Prior Art) AAPA.

Regarding claim 1, Suehiro teach a CDMA system using a class of polyphase pseudoperiodic sequences who's cross correlation value is 0 within a small region of shifts, note Section I, page 837. Suehiro teach generating an expanded sequence of length $N+2L$, whose central part of length N is coincident to the periodic sequence A , note Section III, page 837. Suehiro teach a receiver designed to receive the modulated signals, note Section VII, page 840. However, Suehiro does not discuss making hard decisions from the received signal.

AAPA disclose a general mobile spread spectrum communications system in figure 12, which illustrates a detection circuit for making hard decisions of the received data.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to implement Suehiro's polyphase pseudoperiodic sequence in AAPA spread spectrum communications system, since Suehiro suggest in the abstract, that the system would work without co-channel interference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Munoz whose telephone number is 571-272-3045.

The examiner can normally be reached on Monday-Friday 8:30a.m-4:30p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



GM

October 11, 2004



JEAN B. CORRIELUS
PRIMARY EXAMINER

10-15-04